



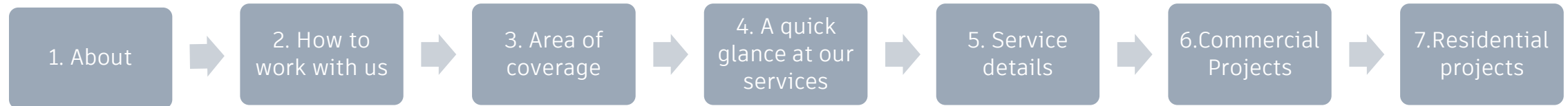
# Zesterex

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**MEP PERMIT PLAN PROVIDER**

# Index

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# About

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We are an offshore engineering firm, produced blueprints for more than 50 projects in North America and Australia following the local codes.

We provide our clients with expertise service with our exclusive experience of being in the industry for over 12 years. We are a leading provider of engineering services for residential, commercial and industrial facilities.

Our service comprises drafting and designs including MEP (Mechanical, Electrical and Plumbing), Architectural Plan, Civil, Structural plan, Energy Compliance (REScheck,COMcheck etc). We are regularly keeping ourselves up to the minute to provide PE for stamping in several states. Additionally, we have representatives for easier communication and local team of architects, engineers and support staff.

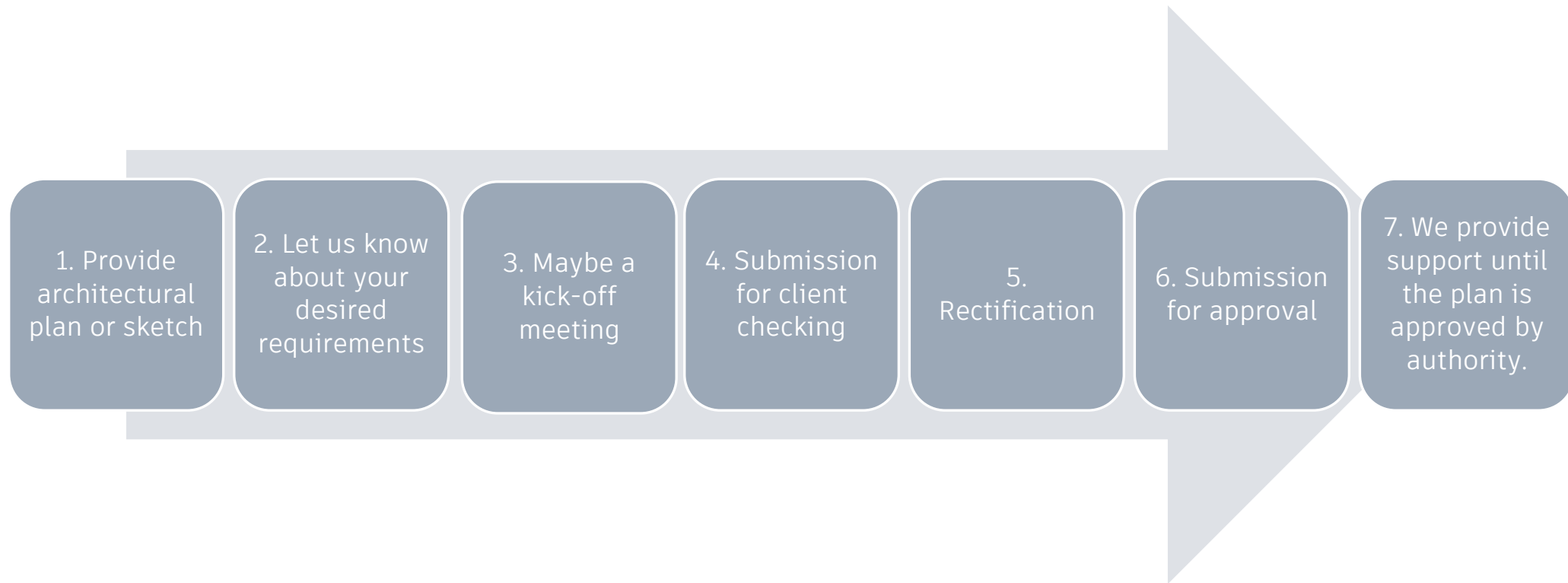
When it comes to attain services, you definitely want a provider with the qualities of reliability, enviable and to be on good time. We ensure to give you the highest quality outcome in the framed time. We have our expert working team, consisted of 5 full time and 12 part time engineers and draftsmen, who works relentlessly to meet your demands with their knowledge, intelligence and passive experience in world class projects.

We opt for creating a sustainable earth worthy of living which is crafted by our expertise. We move forward with an intention of connecting with world class leaders and put a mark through our service.

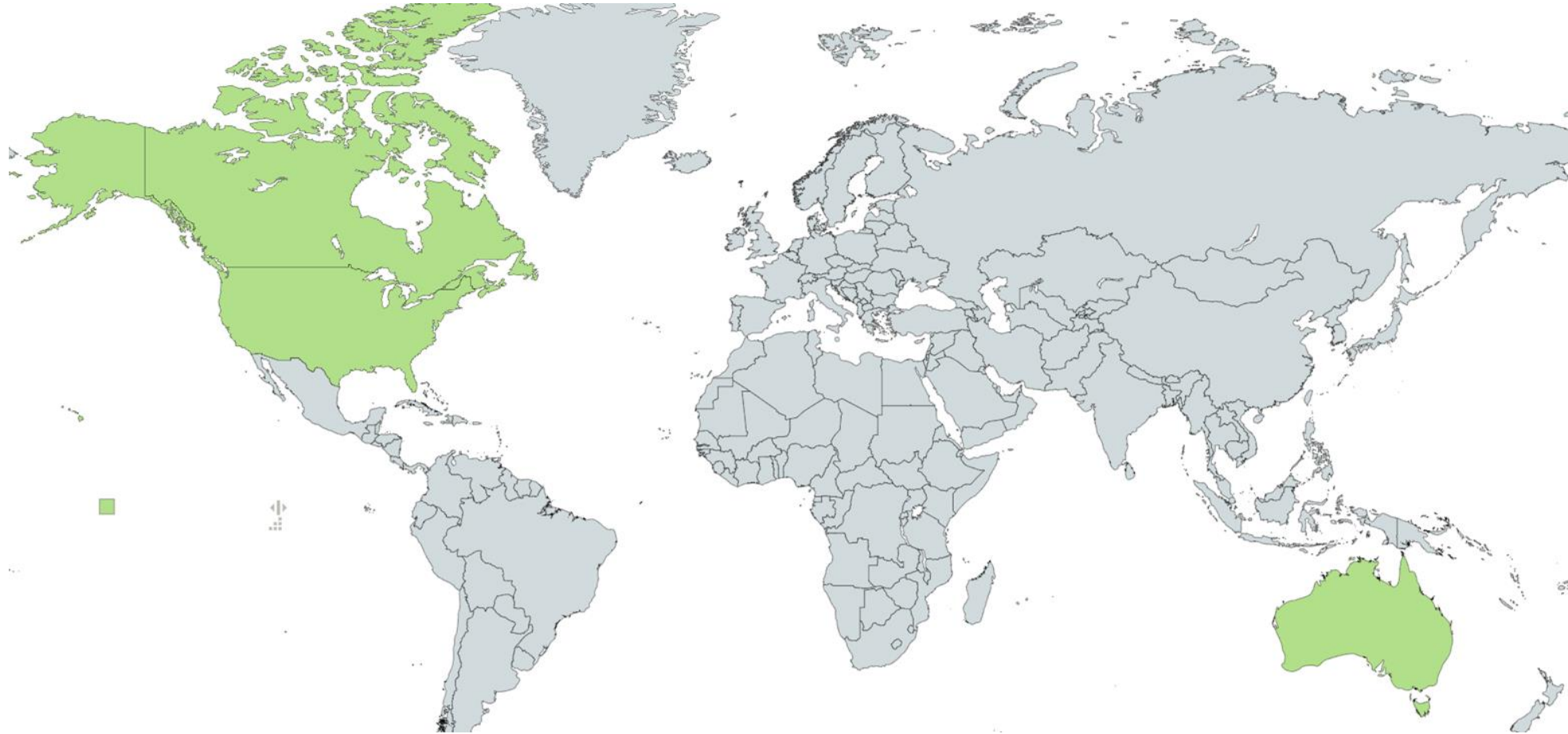


# How To Work With Us

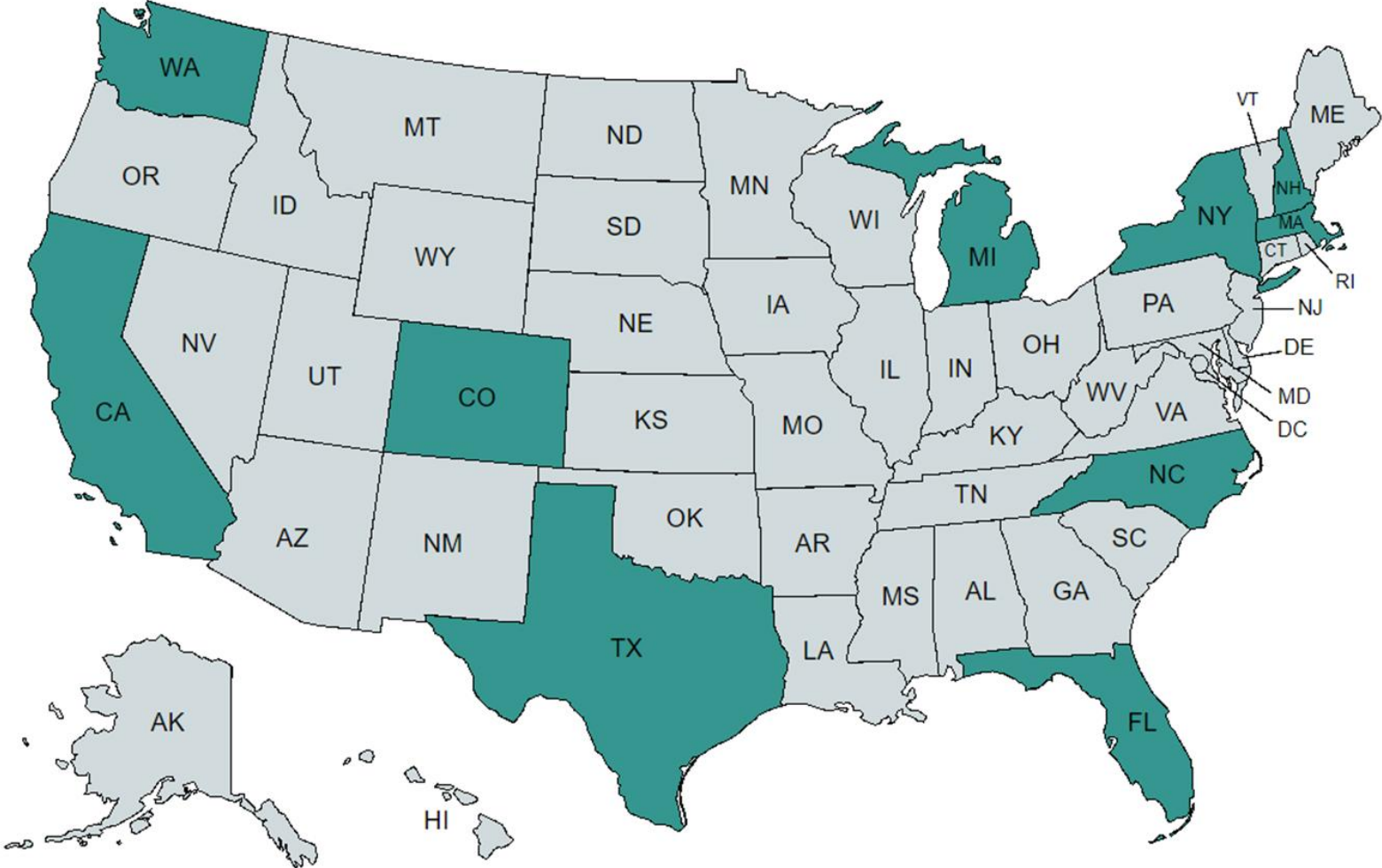
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# Countries we served:



# US States We Served:



# Our Services: A Quick Glance

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ELECTRICAL  
PLAN

MECHANICAL  
PLAN

PLUMBING  
PLAN



# Service Details [ELECTRICAL]

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1. Electrical Service
2. Wiring Diagram
3. Outlet and Receptacle Locations
4. Lighting Plan
5. Specialized Circuits and Systems
6. Electric Vehicle Charger
7. Electrical Load Calculation
8. Safety Features
9. Coordination with Other Plans





# MECHANICAL

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1. HVAC System Design
2. Equipment Layout
3. Ductwork Design
4. Ventilation System
5. Thermostats and Controls
6. Piping Systems
7. Insulation and Sealing
8. Registers, Grillers and Diffusers
9. Exhaust Systems
10. Energy Efficiency Measures
11. Fire and Safety Considerations
12. Documentation and Schedules
13. Coordination With Other Systems



# PLUMBING

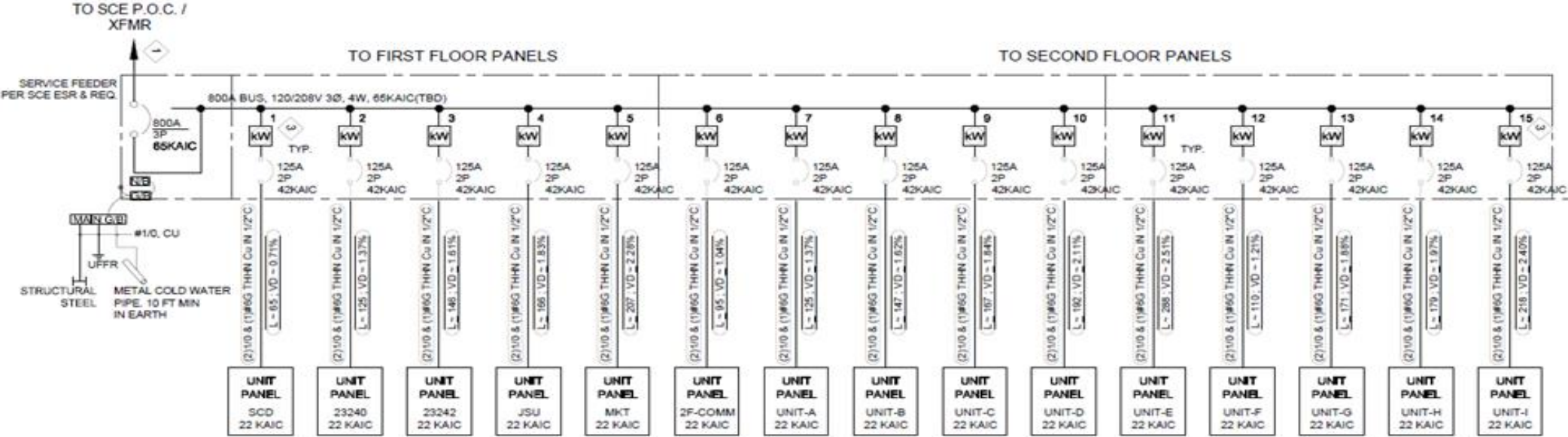
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1. Water Supply System
2. Fixtures and Appliances
3. Hot Water System
4. Drain, Waste and Vent (DWV) system
5. Sewer System
6. Outdoor Plumbing
7. Plumbing Fixtures and Appliances schedule
8. Compliance and Efficiency Measures
9. Coordination with Other Systems
10. Safety Features

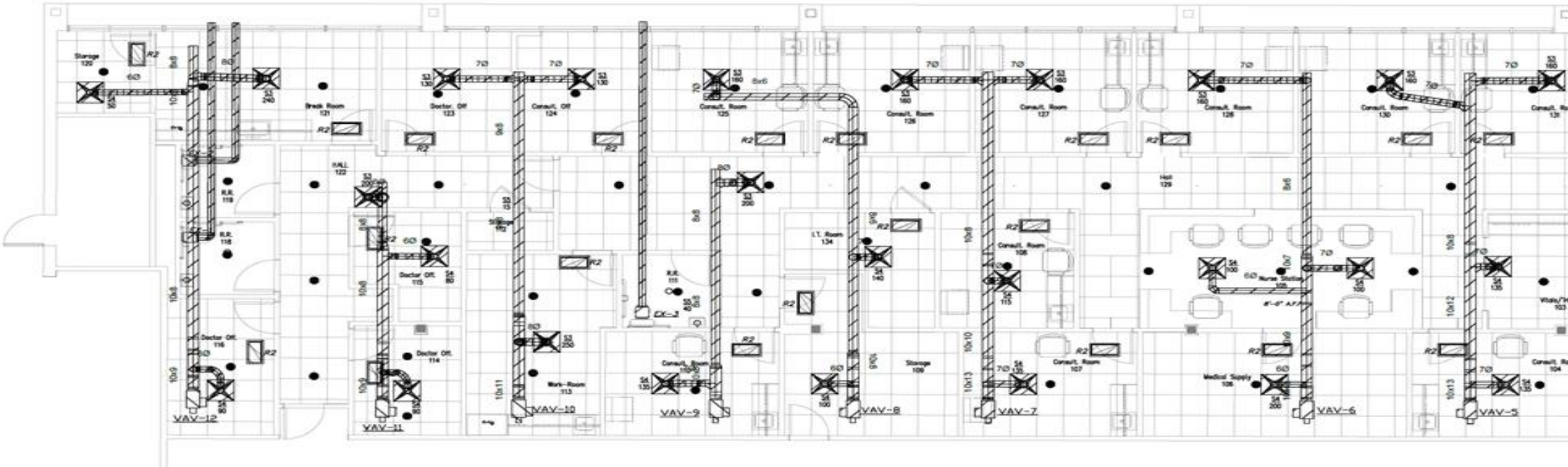


# Commercial projects

## 1. Electrical plan

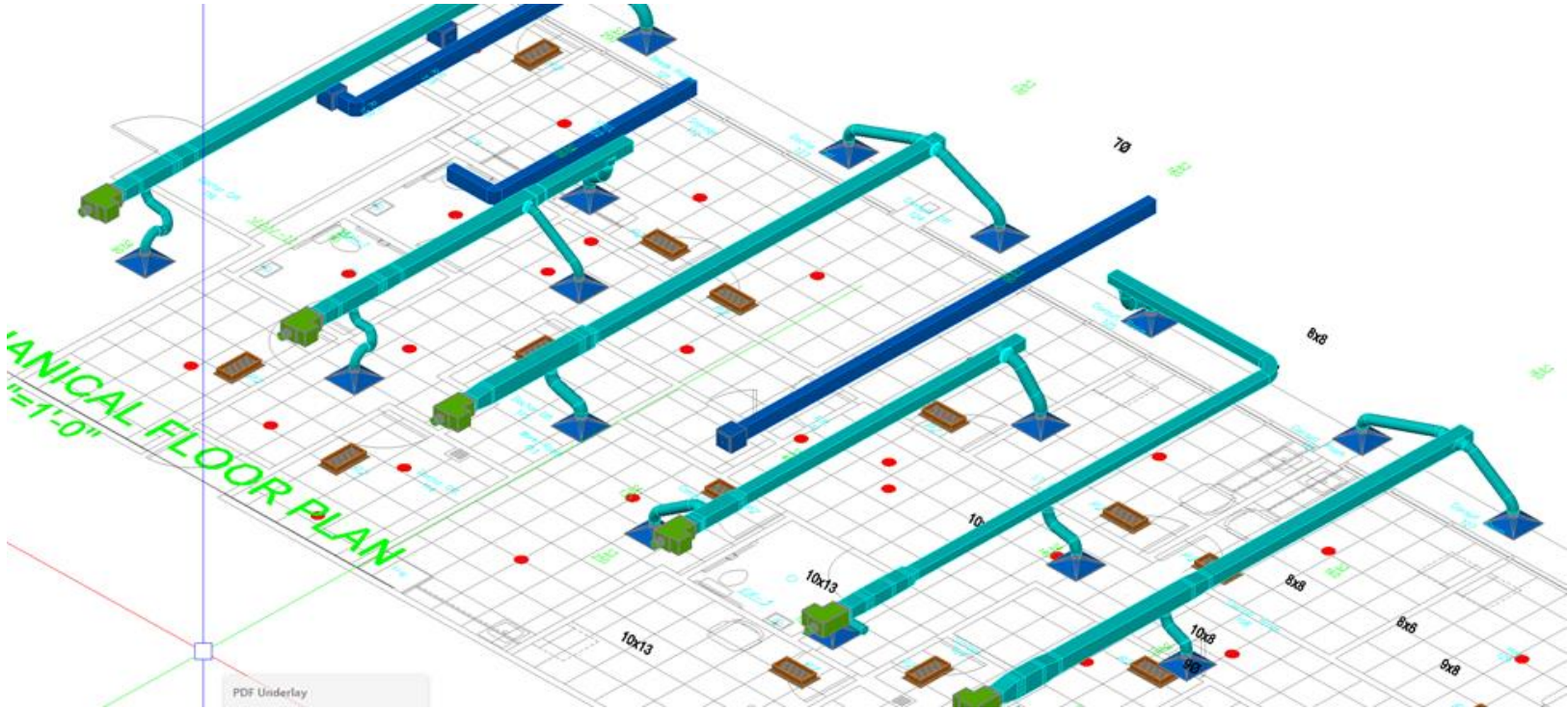


## 2. Mechanical Plan

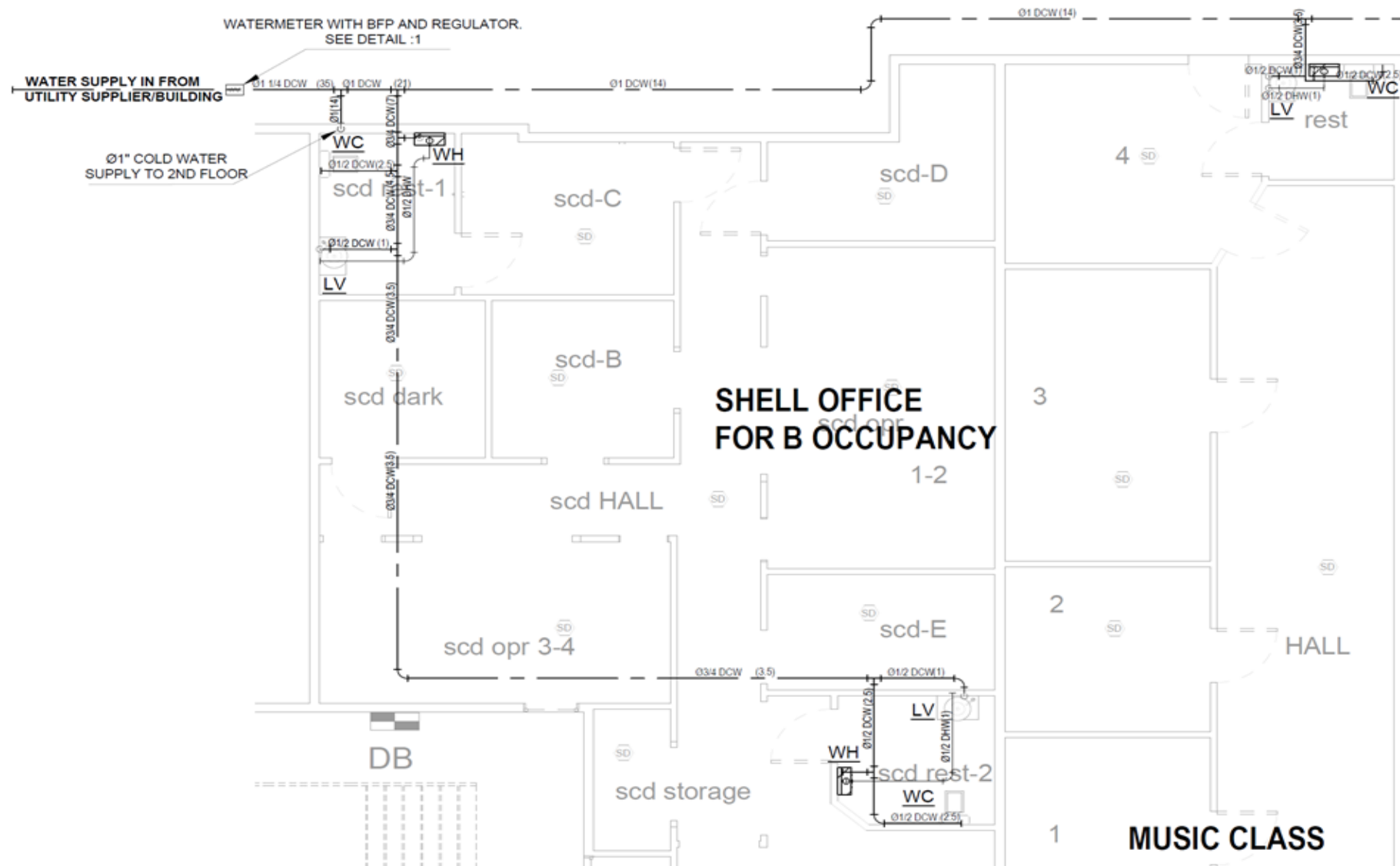


**MECHANICAL FLOOR PLAN**  
**SCALE: 1/8"=1'-0"**

### 3. Mechanical Shop Drawing



# 4. Plumbing Plan



## 5. Plumbing Shop Drawing

## 6. COMcheck

COMcheck is the U.S. Department of Energy commercial energy compliance software tool that determines whether a new commercial building, high-rise residential building, commercial building addition or alteration meets the requirements of IECC prescriptive based paths or ASHRAE Standard 90.1. Find more in <https://www.energycodes.gov/>



COMcheck Software Version 4.1.5.5

### Mechanical Compliance Certificate

#### Project Information

Energy Code: 2018 IECC  
Project Title:  
Location: Houston, Texas  
Climate Zone: 2a  
Project Type: New Construction

Construction Site:

Owner/Agent:

Designer/Contractor:

#### Additional Efficiency Package(s)

Credits: 1.0 Required 1.0 Proposed  
Enhanced Envelope Performance, 1.0 credit

#### Mechanical Systems List

##### Quantity System Type & Description

- |   |   |
|---|---|
| 1 | HVAC System 1 (Single Zone):<br>Split System Heat Pump<br>Heating Mode: Capacity = 24 kBtu/h,<br>Proposed Efficiency = 8.20 HSPF, Required Efficiency = 8.20 HSPF<br>Cooling Mode: Capacity = 24 kBtu/h,<br>Proposed Efficiency = 14.00 SEER, Required Efficiency: 14.00 SEER<br>Fan System: None |
| 1 | Water Heater 1:<br>Electric Storage Water Heater, Capacity: 0 gallons w/ Heat Trace Tape Installed<br>Proposed Efficiency: 0.09 SL, %/h (if > 12 kW), Required Efficiency: 1.00 SL, %/h (if > 12 kW)  |



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## 7. **Low-Rise Multifamily Energy Code Forms**

Official California Energy Commission compliance documents you can use to show compliance with California Building Energy Efficiency Standards (Title 24, Part 6 or Energy Code).

These forms are for low-rise (three stories or less) Multifamily and Mixed-Use projects starting with the Energy Code. High-rise (four stories or more) projects should use the Nonresidential forms.

## 8. **Nonresidential & High-rise Multifamily Energy Code Forms**

Official California Energy Commission compliance documents you can use to show compliance with California Building Energy Efficiency Standards (Title 24, Part 6 or Energy Code).

These forms are for nonresidential, high-rise multifamily (4 stories or greater) and high-rise mixed-use (4 stories or greater) projects.

The Nonresidential Certificates of Compliance (NRCC) are to demonstrate the construction documents are compliant with the Energy Code at the time of permit application.





F. INDOOR LIGHTING FIXTURE SCHEDULE										
<i>This table includes all planned permanent and portable lighting other than dwelling unit/ hotel/ motel room lighting. Multifamily dwelling unit and hotel/motel room lighting is documented in Table T. If using Table T to document lighting in multifamily common use areas providing shared provisions for living, eating, cooking or sanitation, those luminaires are not included here.</i>										
Designed Wattage: Conditioned Spaces										
01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change <sup>1</sup>	Watts per luminaire <sup>2</sup>	How is Wattage determined	Total Number of Luminaires	Excluded per 140.6(a)3 / 170.2(e)2C	Design Watts	Field Inspector	
									Pass	Fail
1	24X24 RECESSED LED LIGHT WITH DIMMING DRIVER	No	NA	24	Mfr. Spec	275	No	6,600	<input type="checkbox"/>	<input type="checkbox"/>
<b>Total Designed Watts: CONDITIONED SPACES</b>								6,600		
Designed Wattage: Unconditioned Spaces										
01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change <sup>1</sup>	Watts per luminaire <sup>2</sup>	How is Wattage determined	Total Number of Luminaires	Excluded per 140.6(a)3 / 170.2(e)2C	Design Watts	Field Inspector	
									Pass	Fail
2	WALL MOUNTED LED LIGHT WITH DIMMING DRIVER	No	NA	34.3	Mfr. Spec	8	No	274.4	<input type="checkbox"/>	<input type="checkbox"/>
1	24X24 RECESSED LED LIGHT WITH DIMMING DRIVER	No	NA	24	Mfr. Spec	20	No	480	<input type="checkbox"/>	<input type="checkbox"/>
<b>Total Designed Watts: UNCONDITIONED SPACES</b>								754.4		

<sup>1</sup>FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per 140.6(a)4B / 170.2(e)2D is adjusted to be 75% /80% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.

<sup>2</sup>Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b). Wattage used must be the maximum rated for the luminaire, not the lamp.

G. MODULAR LIGHTING SYSTEMS
<i>This section does not apply to this project.</i>

Generated Date/Time:

Documentation Software: Energy Code Ace

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance

Report Version: 2022.0.000  
Schema Version: rev 20220101

Compliance ID: 152746-1223-0017  
Report Generated: 2023-12-12 07:35:15



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# Residential projects

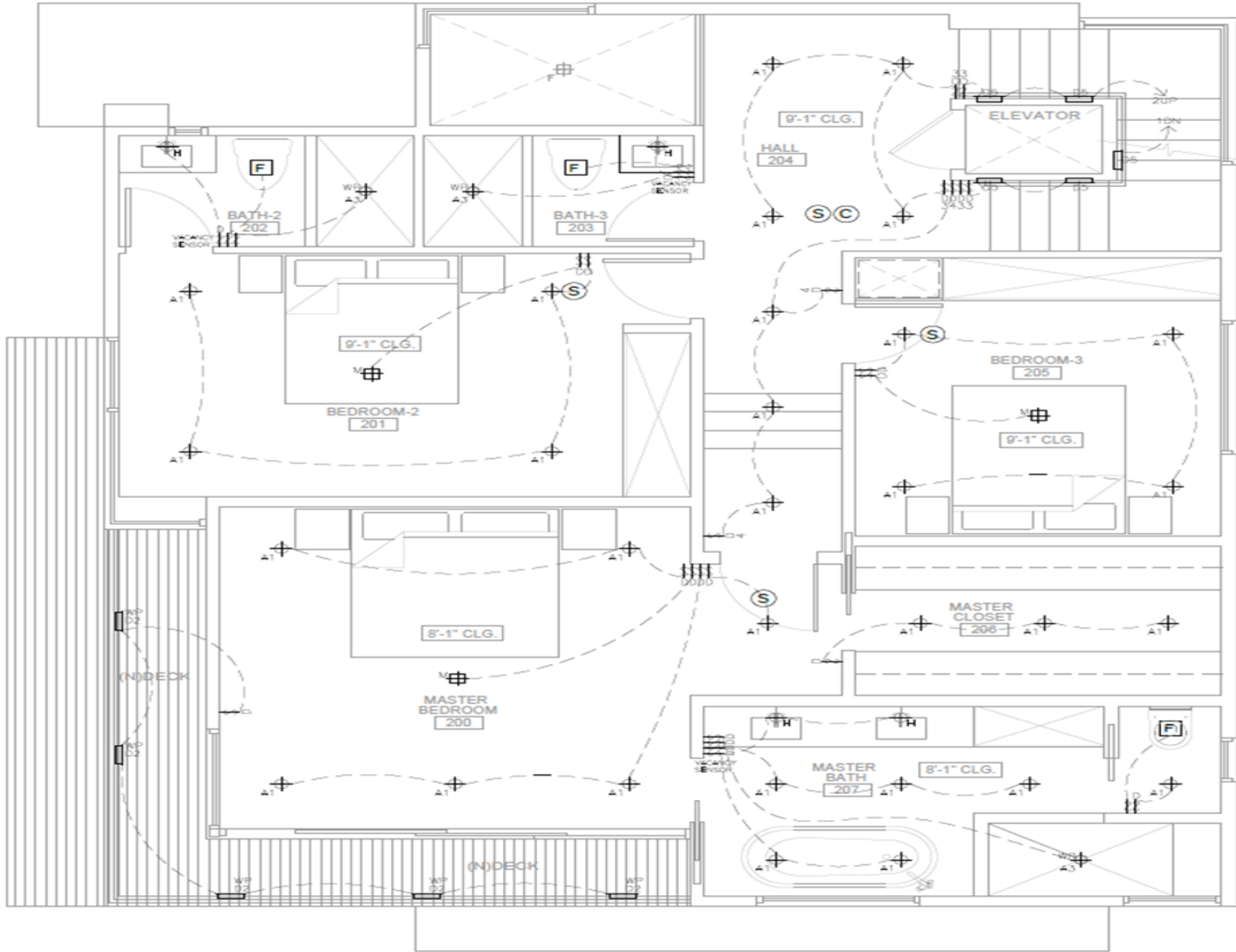
## 1. Electrical plan

We'll create a lighting plan, power plan, one-line diagram, and electrical schedules coherent with building backgrounds, mechanical and plumbing plans. Sometimes street lighting with photometrics are also provided, and fire alarm design where required.

For remodeling projects, we'll require photographs of the existing service (meters, CTs, switch gears, etc.) so that we have an understanding of the suite to recreate the plans when no existing plans are available.

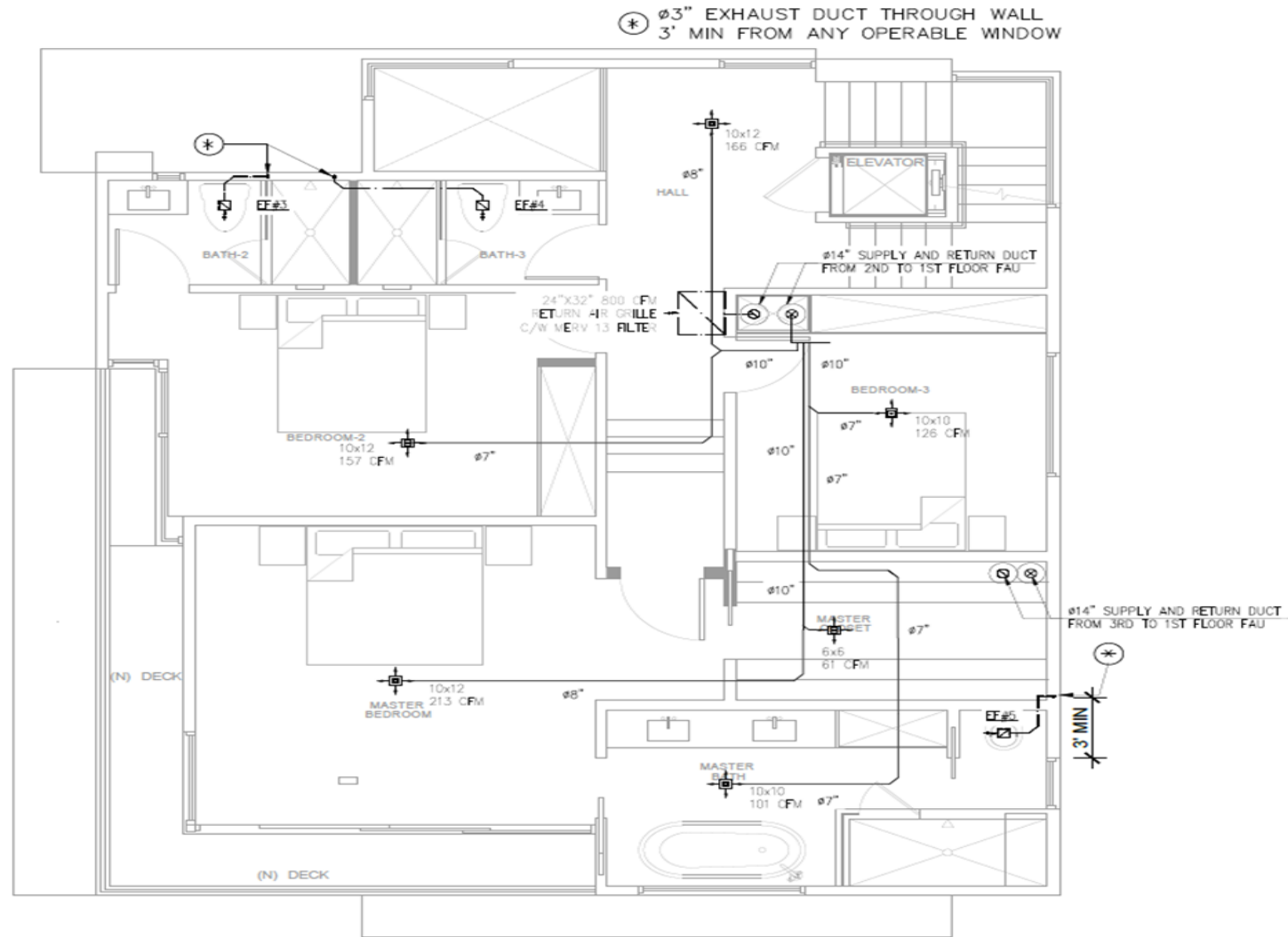
Model Selection for all equipment including Load Centre, Metering Panel, Breaker Mains, transformers and Lighting Fixture Models will also be provided along with the plans.



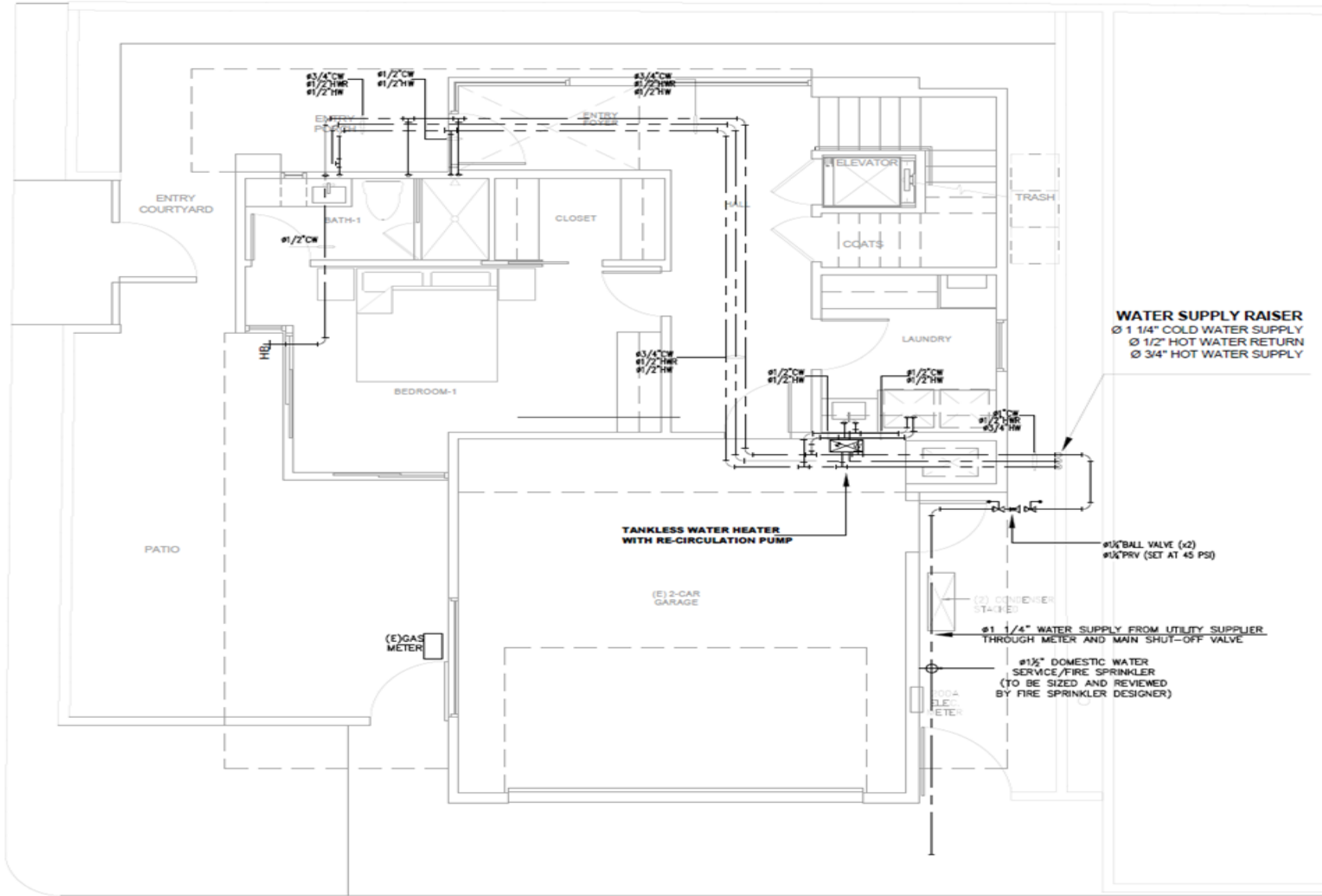


## 2. Mechanical plan

We do HVAC load calculation and drawing i.e. a complete set for mechanical submittal. We do residential projects frequently, California, Texas, Massachusetts and all the other states.



# 3. Plumbing Plan



**WATER SUPPLY RAISER**  
 Ø 1 1/4" COLD WATER SUPPLY  
 Ø 1/2" HOT WATER RETURN  
 Ø 3/4" HOT WATER SUPPLY

**TANKLESS WATER HEATER WITH RE-CIRCULATION PUMP**

Ø 1/2" BALL VALVE (x2)  
 Ø 1/2" PRV (SET AT 45 PSI)

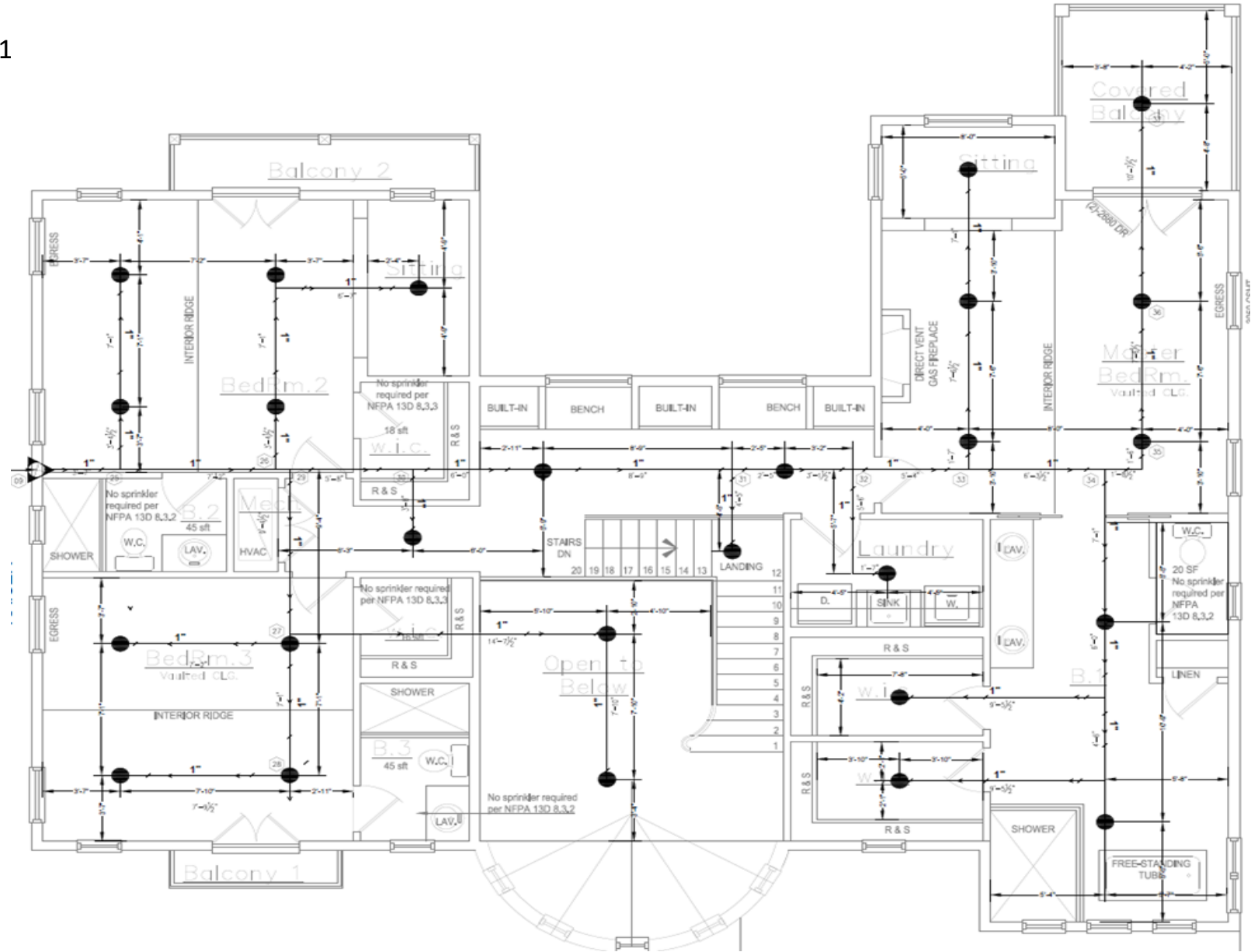
Ø 1 1/4" WATER SUPPLY FROM UTILITY SUPPLIER THROUGH METER AND MAIN SHUT-OFF VALVE

Ø 1 1/2" DOMESTIC WATER SERVICE/FIRE SPRINKLER (TO BE SIZED AND REVIEWED BY FIRE SPRINKLER DESIGNER)

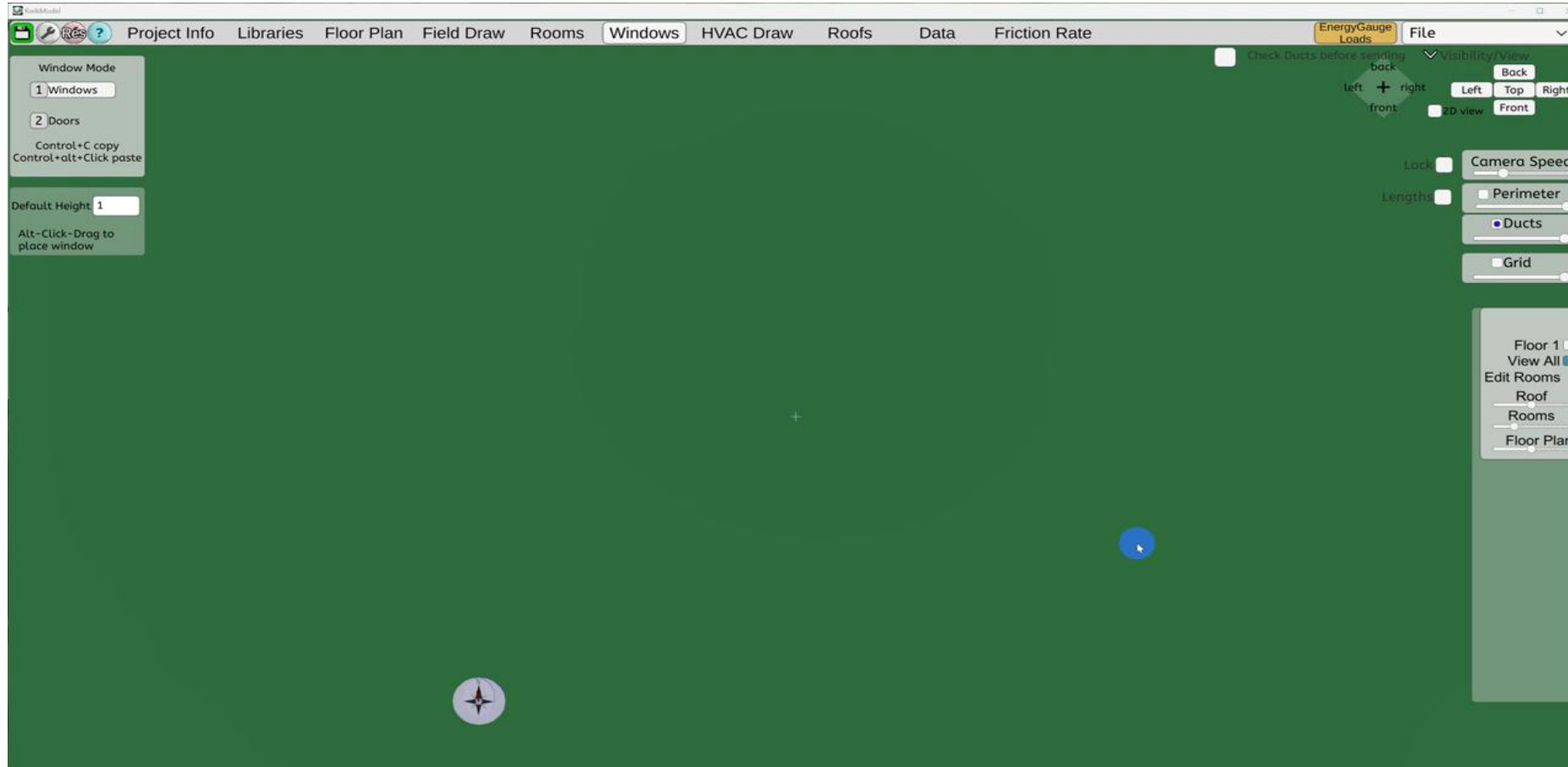


# 4. Sprinkler plan

Per NFPA 13, NFPA 13D, NFPA 1



## 5. HVAC Load Calc



## 6. REScheck

The REScheck product group makes it fast and easy for builders, designers, and contractors to determine whether new homes, additions, and alterations meet the requirements of the IECC or a number of state energy codes. REScheck also simplifies compliance determinations for building officials, plan checkers, and inspectors by allowing them to quickly determine if a low-rise residence meets the code.

REScheck is appropriate for insulation and window trade-off calculations in residential detached one- and two-family buildings and multi-family buildings three stories or less in height above grade, such as apartments, condominiums, and townhouses. REScheck works by performing a simple U-factor x Area (UA) calculation for each building assembly to determine the overall UA of a building. The UA that would result from a building conforming to the code requirements is compared against the UA for your building. If the total heat loss (represented as a UA) through the envelope of your building does not exceed the total heat loss from the same building conforming to the code, the software generates a report that declares your building is compliant with the code.







# Compliance Certificate

## Project

Energy Code: **2015 IECC**  
Location: **Woodcreek, Texas**  
Construction Type: **Single-family**  
Project Type: **New Construction**  
Orientation: **Bldg. faces 0 deg. from North**  
Conditioned Floor Area: **770 ft<sup>2</sup>**  
Glazing Area: **20%**  
Climate Zone: **2 (1852 HDD)**  
Permit Date:  
Permit Number:

Construction Site:

Owner/Agent:

Designer/Contractor:

**Compliance: Passes using performance alternative**Compliance: **1.6% Better Than Code**

NOTE: Slab-on-grade tradeoffs are no longer considered in the UA or performance compliance path in REScheck. Each slab-on-grade assembly in the specified climate zone must meet the minimum energy code insulation R-value and depth requirements.

## Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Prop. U-Factor	Req. U-Factor	Prop. UA	Req. UA
Wall 1: Wood Frame, 16" o.c. Orientation: Front	465	15.0	15.0	0.034	0.084	11	27
Window 1: Vinyl/Fiberglass Frame:Double Pane SHGC: 0.18 Orientation: Front	120			0.300	0.400	36	48
Door 1: Glass SHGC: 0.18 Orientation: Front	21			0.300	0.400	6	8
Wall 2: Wood Frame, 16" o.c. Orientation: Left side	500	15.0	15.0	0.034	0.084	13	32
Window 2: Vinyl/Fiberglass Frame:Double Pane SHGC: 0.18 Orientation: Left side	120			0.300	0.400	36	48
Wall 3: Wood Frame, 16" o.c. Orientation: Back	465	15.0	15.0	0.034	0.084	12	29
Window 3: Vinyl/Fiberglass Frame:Double Pane SHGC: 0.18 Orientation: Back	120			0.300	0.400	36	48



THANK YOU

FOR A QUICK PROPOSAL

FOR CONTACT

SCAN THE QR

